



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,901	06/27/2003	Jing-Jin Tsai	TSAI3080/EM	6141

23364 7590 12/23/2004  
BACON & THOMAS, PLLC  
625 SLATERS LANE  
FOURTH FLOOR  
ALEXANDRIA, VA 22314

EXAMINER

REDDICK, MARIE L

ART UNIT	PAPER NUMBER
----------	--------------

1713

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/606,901

Applicant(s)

TSAI ET AL.

Examiner

Judy M. Reddick

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 1713

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The abstract of the disclosure is objected to because it houses paragraphs in excess of one. Correction is required. See MPEP § 608.01(b).

3. The disclosure is objected to because of the following informalities: On page 1 @ line 14, it is believed that "tones" should read "tons".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

5. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A) The recited "a molecular weight of the polyvinyl acetate copolymer is from 1,000 to 800,000" per claim 1 constitutes indefinite subject matter as per it not being readily ascertainable as to whether "weight average" or "number average" is intended, the two being substantially different as would be substantiated by any basic Polymer Chemistry textbook.

B) The recited "preferably" per claim 4 constitutes indefinite subject matter as per it not being readily ascertainable as to if or how said objectionable term "preferably" further limits the claims, i.e., it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

C) The structurally depicted formula (I) per claim 4 constitutes indefinite subject matter as per it not being readily ascertainable as to how said formula further limits the antecedently structurally depicted formula when "m" is zero and "3-m" is zero. Applicant's comments are welcomed.

Claim Rejections - 35 USC § 102

Art Unit: 1713

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-11 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Plesich et al (U.S. 3,729,438) or Kowalski et al (U.S. 3,814,716).

Each of Plesich et al and Kowalski et al teach latex (aqueous emulsion) polymers comprising a one-pot aqueous dispersion of an interpolymer selected from (A) a copolymer of vinyl acetate and vinyl hydrolysable silane such as , vinyltrimethoxy silane, vinyltriethoxysilane, etc. or B) a terpolymer of vinyl acetate, an ester, e.g., acrylic ester and vinyl hydrolysable silane such as vinyltrimethoxysilane, vinyltriethoxysilane, etc. and crosslinked polymers derived therefrom, useful as under coatings or top coatings on substrates such as wood and wood fibers, wherein the latex polymers are prepared by processes which basically involve polymerizing the monomers in an aqueous dispersion which contains a vinyl hydrolysable silane, water, a catalyst which includes peroxides and persulfates and a surfactant at a temperature ranging from about 20 to about 85 degrees C and at atmospheric pressure, wherein the silane-vinyl acetate latex polymers include copolymers of about 99 to about 99.5 % by wt. vinyl acetate and about 0.5 to about 1 percent by weight of the silane wherein, upon removal of water from said latex polymers, the interpolymer further cures (ages) into a crosslinked polymer (col. 1, lines 13-72, col. 2, lines 1-72, col. 3, lines 1-72, col. 4, lines 1-60, col. 5, lines 15-32, col. 6, lines 7-32, Run 5 and the claims of Plesich et al and col. 1, lines 14-72, cols. 2-4, col. 5, lines 29-47, col. 6, lines 23-46, Run 5 and the claims of Kowalski et al). Each of Plesich et al and Kowalski et al therefore anticipate the instantly claimed invention with the understanding that the latex polymers and process of producing said latex polymers per each of Plesich et al and Kowalski et al overlap in scope with the claimed polyvinyl acetate copolymer aqueous

Art Unit: 1713

emulsion (1-3) and method of preparing said polyvinyl acetate copolymer emulsion (4-11). The x/y ratios (1-5) appear to be met by the vinyl acetate-vinyl hydrolysable silane copolymer of Plesich et al and Kowalski et al. It is reasonably presumed that the molecular weight of the vinyl acetate-vinyl hydrolysable silane copolymers of Plesich et al and Kowalski et al overlap in scope with the claimed polyvinyl acetate copolymer since it is essentially the same as the claimed polyvinyl acetate copolymer and in the absence of the United Patent and Trademark Office to have at it's the disposal the tools and/or facilities deemed necessary in making physical determinations of this sort. The onus to show that this, in fact, is not the case, is shifted to applicant.

It has been held that where applicants claims a composition in terms of function, property or characteristic where said function is not explicitly shown by the reference and where the Examiner has explained why the function, property or characteristics is considered inherent in the prior art, it is appropriate for the Examiner to make a rejection under both the applicable sections of 35 USC 102 and 35 USC 103 such that the burden is placed upon applicant to provide clear evidence that the respective compositions do, in fact, differ as provided for under the guise of *In re Best*, 195 USPQ 430, 433 (CCPA 1977); *In re Fitzgerald et al*, 205 USPQ 594.

When the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claimed in a product-by-process claim it is appropriate for the examiner to make a rejection under both the applicable section of 35 USC 102 and 35 USC 103 such that the burden is placed upon applicant to provide clear and convincing factual evidence that the respective products do in fact differ in kind - *In re Brown*, 59 CCPA 1063, 173 USPQ 685 (1972); *In re Fessman*, 180 USPQ 324 (CCPA 1974) - and to come forward with evidence establishing unobvious differences between the claimed product and the prior art product. *In re Marosi* 218 USPQ 289.

Even if it turns out that the Examiner has somehow missed the boat and the claims are not anticipated by the disclosures of Plesich et al and Kowalski et al, it would have been obvious to the skilled artisan to extrapolate, from the disclosures of Plesich et al and Kowalski et al, the precisely defined one-pot polyvinyl acetate copolymer aqueous emulsion and method of producing the one-pot polyvinyl acetate copolymer aqueous emulsion, as claimed, as per such having been within the purview of the general disclosures of Plesich et al and Kowalski et al and with a reasonable expectation of success.

As to the dependent claims, if not taught or suggested, the limitations would have been obvious to the skilled artisan and with a reasonable expectation of success, i.e., any additional or particular claim parameters which may not be specifically set out in the references are considered to be inherent in the reference products or not to involve anything unobvious absent a showing to the contrary.

Art Unit: 1713

#### Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-11 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of copending Application No. 10/606,901. Although the conflicting claims are not identical, they are not patentably distinct from each other because the polyvinyl acetate aqueous emulsion per the claims of copending application '902 overlaps in scope with the one-pot polyvinyl acetate copolymer aqueous emulsion per the instantly claimed invention. The process of preparing the aqueous emulsion would have been well within the purview of the skilled artisan and with a reasonable expectation of success. Any additional or particular claim parameters which may not be specifically set out in the claims of the reference is considered to be inherent in the reference products or not to involve anything unobvious absent a showing to the contrary.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

#### Conclusion

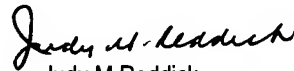
10. The prior art to Liles et al (U.S. 5,482,994), listed on the attached FORM PTO 892, is cited as of interest in teaching polymer latexes produced by adding an unsaturated alkoxy silane and an initiator to a preformed emulsion polymer and is considered merely cumulative to the prior art supra. The remaining prior art is cited as of being illustrative of the general state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judy M. Reddick whose telephone number is (571) 272-1110. The examiner can normally be reached on 6:00 a.m.-2:30 p.m..

Art Unit: 1713

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Judy M Reddick  
Primary Examiner  
Art Unit 1713

JMR *JMR*  
12/12/04